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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/618,156	07/11/2003	Jean Yee-Mei Yang	0180117	4060
25700	7590	01/04/2005		EXAMINER
				TRINH, HOA B
			ART UNIT	PAPER NUMBER
				2814

DATE MAILED: 01/04/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	10/618,156	YANG ET AL.
	Examiner	Art Unit
	Vikki H. Trinh	2814

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 05 October 2004.
 2a) This action is **FINAL**. 2b) This action is non-final.
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1-11 and 22-29 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
 5) Claim(s) _____ is/are allowed.
 6) Claim(s) 1-11 and 22-29 is/are rejected.
 7) Claim(s) _____ is/are objected to.
 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.
 10) The drawing(s) filed on 11 July 2003 is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date. _____
3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
	6) <input type="checkbox"/> Other: _____

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of Group I, claims 1-11 and 22-29, in the reply filed on 10/05/04 is acknowledged.
2. Claims 1-11 and 22-29 are pending.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-11 and 22-29 are rejected under 35 U.S.C. 102(b) as being anticipated by Liao et al. (5,999,152) (hereinafter Liao).

Liao discloses, as to claims 1 and 22, a memory structure (col. 1, lines 14-15) comprising a substrate 'g' (figs. 1 and 2) having a drain region (figs. 1 and 2), a source region 'b' (figs. 1 and 2) and a channel region being between said source region and said drain region (figs. 1 and 2); a gate layer 'c' (figs. 1 and 2) formed over said channel region of said substrate 'g' (figs. 1 and 2); a tunable interlayer dielectric 'h' (figs. 1 and 2) formed over said gate layer and said substrate 'g' (col. 5, lines 4-12) , said tunable interlayer dielectric comprising a matrix and tunable material situated within said matrix (col. 5, lines 5-12); said tunable interlayer dielectric 'h' having a transparent state and an opaque state (col. 2, lines 15-20), said transparent state allowing UV rays to pass through said tunable interlayer dielectric to said gate layer (col. 1, lines 27-45), said opaque state

preventing UV ray to pass through said tunable interlayer dielectric to said gate layer 'c' (figs. 1 and 2).

According to claim 2 and 23, the tunable material comprises a plurality of liquid crystal droplets 'i' (col. 5, lines 5-7), each of said plurality of liquid crystal droplets 'i' having a corresponding crystal director, said corresponding crystal director defining a polar orientation of each of said plurality of liquid crystal droplets 'i' (col. 5, lines 19-34).

As to claims 3-5 and 24, the corresponding crystal director has a random orientation within said matrix during said opaque state (col. 3, lines 25-55).

As to claims 6 and 25, the corresponding crystal director has a uniform orientation within the matrix during the transparent state (co. 3, lines 40-67).

As to claims 7-8 and 26, the transparent state is enabled when a magnetic field is or is not applied across the tunable interlayer dielectric (col. 3, lines 25-55).

As to claims 9 and 27, the tunable material is selected from a group consisting of electrically tunable material and magnetically tunable material (col. 5, lines 1-15).

As to claims 10 and 28, the matrix is polymer (col. 5, lines 5-10).

As to claims 11 and 29, the gate layer 'c" is a storing layer (fig. 1).

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.
6. Yang et al. (6,061,107) teaches a liquid crystal dispersions with liquid crystal droplets formed in the polymer matrix.

7. Kyu et al. (6,815,016) teaches an array having a mixture of polymer matrix and liquid crystal droplets.

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Vikki Trinh whose telephone number is (571) 272-1719. The Examiner can normally be reached from Monday-Friday, 9:00 AM - 5:30 PM Eastern Time. If attempts to reach the examiner by telephone are unsuccessful, the Examiner's supervisor, Mr. Wael Fahmy, can be reached at (571) 272-1705. The office fax number is 703-872-9306.

Any request for information regarding to the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Also, status information for published applications may be obtained from either Private PAIR or Public Pair. In addition, status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. If you have questions pertaining to the Private PAIR system, please contact the Electronic Business Center (EBC) at 866-217-9197 (toll free).

Lastly, paper copies of cited U.S. patents and U.S. patent application publications will cease to be mailed to applicants with Office actions as of June 2004. Paper copies of foreign patents and non-patent literature will continue to be included with office actions. These cited U.S. patents and patent application publications are available for download via the Office's PAIR. As an alternate source, all U.S. patents and patent application publications are available on the USPTO web site (www.uspto.gov), from the Office of Public Records and from commercial sources. Applicants are referred to the Electronic Business Center (EBC) at <http://www.uspto.gov/ebc/index.html> or 1-866-217-9197 for information on this policy. Requests

to restart a period for response due to a missing U.S. patent or patent application publications will not be granted.

Vikki Trinh,
Patent Examiner
AU 2814



HOWARD WEISS
PRIMARY EXAMINER